

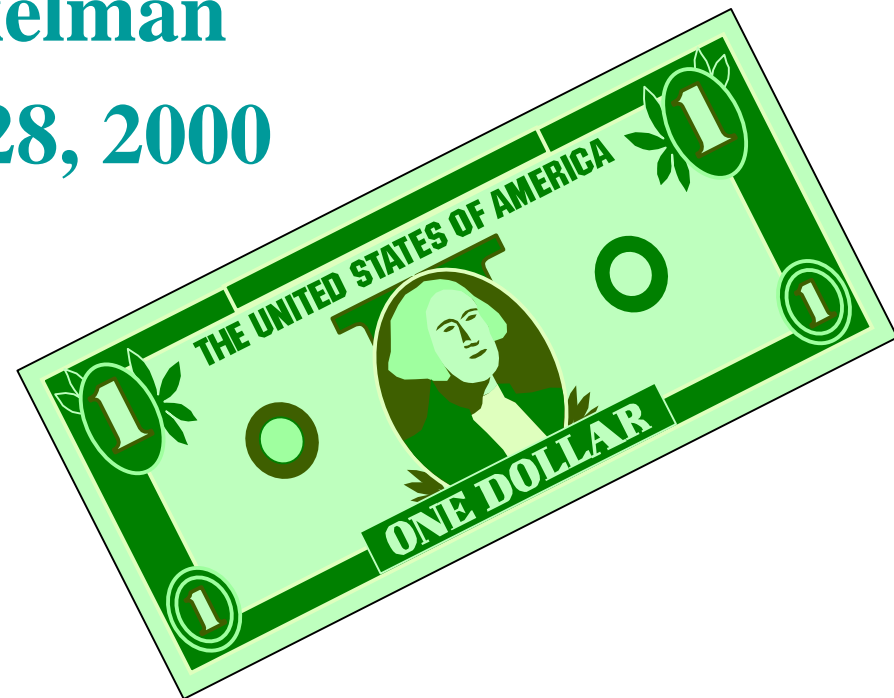
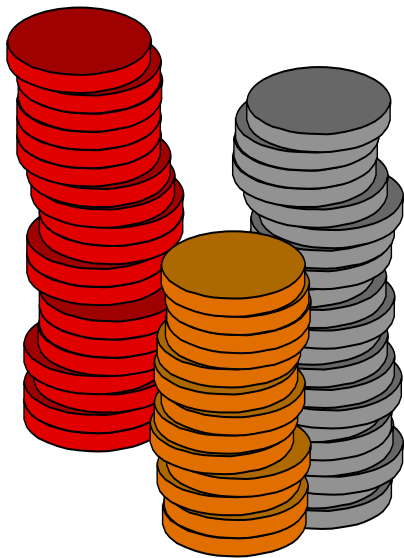


PRICE ANALYSIS\$

Presented by:

Eric Heckelman

March 27-28, 2000





Agenda

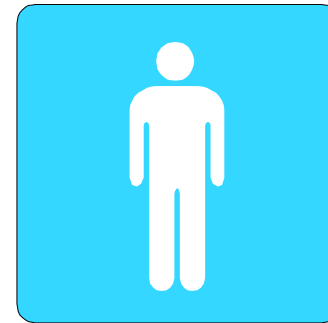
- Introductions
- Benefits and C.Y.A.
- Terminology
 - Distinctions
 - Responsiveness and Responsibility Quiz
- Price Analysis Hierarchy
 - Primary Techniques
 - Secondary Techniques
 - Auxiliary Techniques



Introduction

Logistics

2part seminar





Introduction

Review of Handouts

- Slide handouts for notes
- “Draft” Procedure CAM 3.5.5
 - <http://www.pd.dgs.ca.gov/acqui/355.pdf>
 - Appendix 1 - Detailed requirements of each price analysis technique
 - Appendix 2 - Glossary
- Selected Exercises
- Tool Application Matrix
- Hierarchy of Techniques

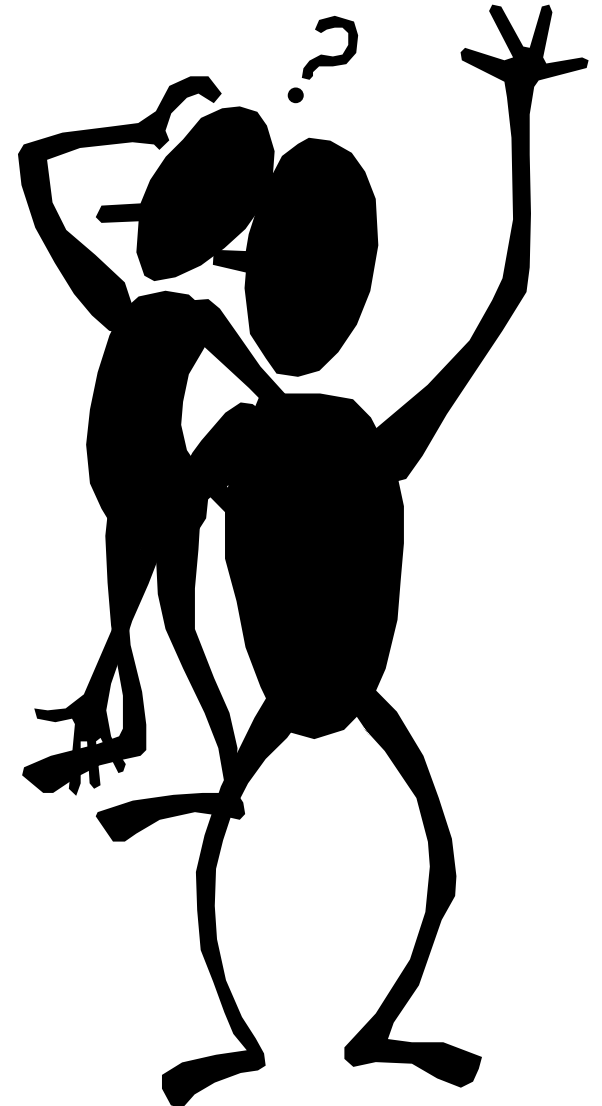


Introduction

Questions

- **Have a Question ???**
- **Don't Hesitate.....**

participate!





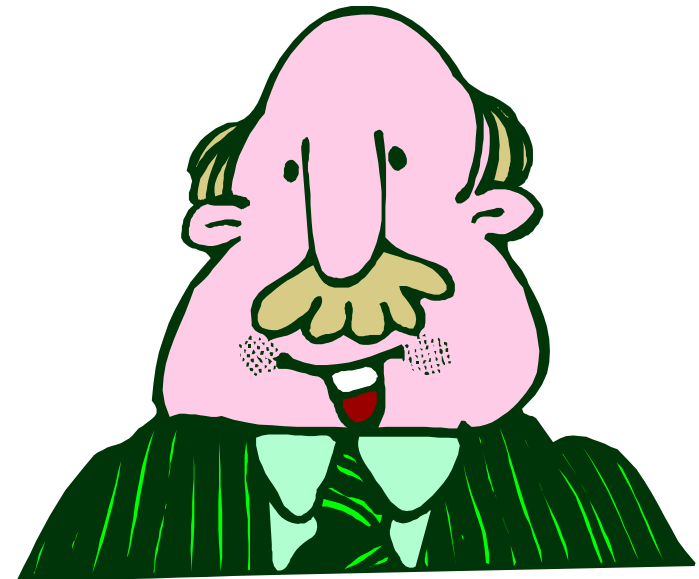
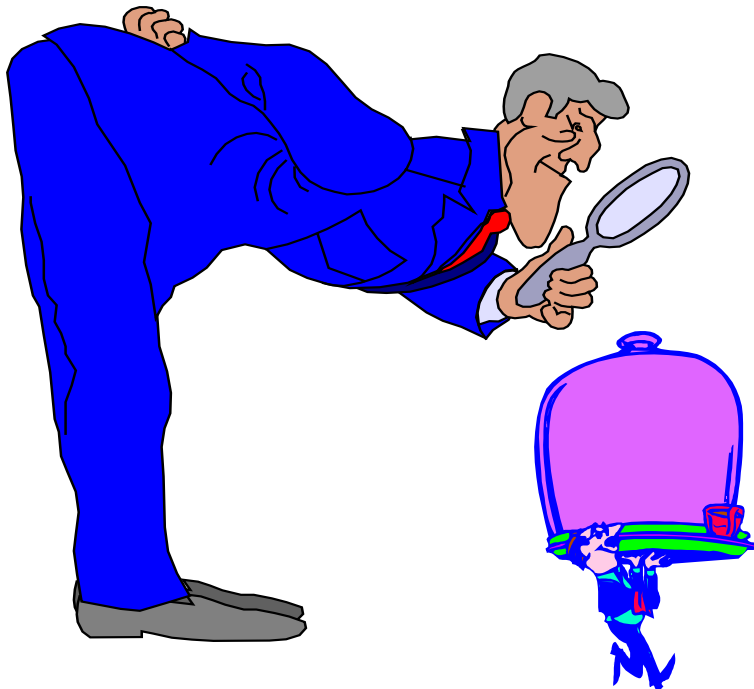
Benefits of Price Analysis

- Use taxpayer \$ wisely
- Credibility by establishing “baseline” for future pricing
 - quality analysis
 - thorough documentation
- Develop universal professional skills
- Aid in management review &/or approval
- Reduce Protests
- State - required in all procurement transactions greater than \$2,500



Communicate
Your
Analysis

Document!

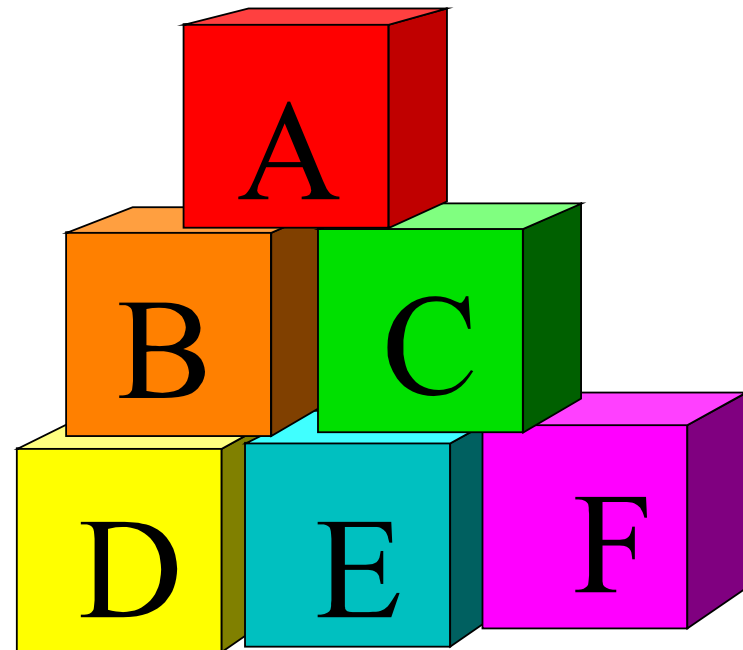


A Happy Auditor



Terminology

- Acquisition
- Bid
- Buyer
- Contract





Terminology

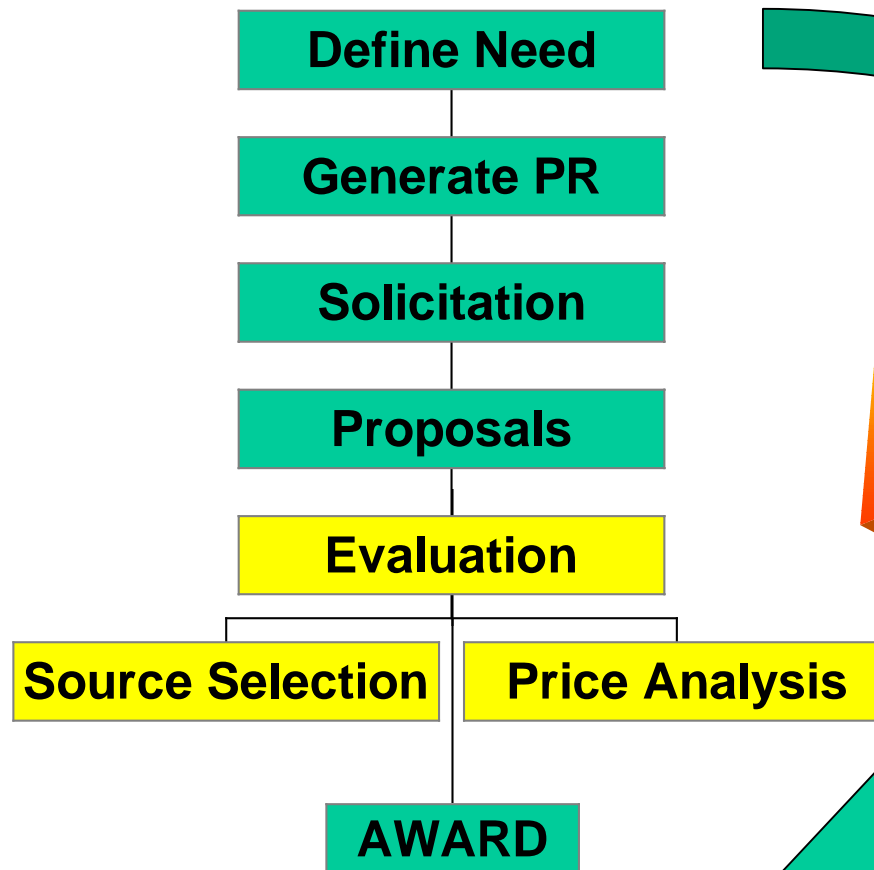
Acquisition

- Procuring goods and/or services
- To benefit the government
- By initiation of contract (regardless of form)
 - Purchase order
 - Standard 2
 - CMAS
 - Master Agreement



Terminology

Acquisition Process



Acquisition



Terminology

Bid

- A firm offer to enter into a binding contract
- Characteristics
 - Verbal or written
 - in response to a solicitation
 - from one or more suppliers
 - expected to result in award of a contract

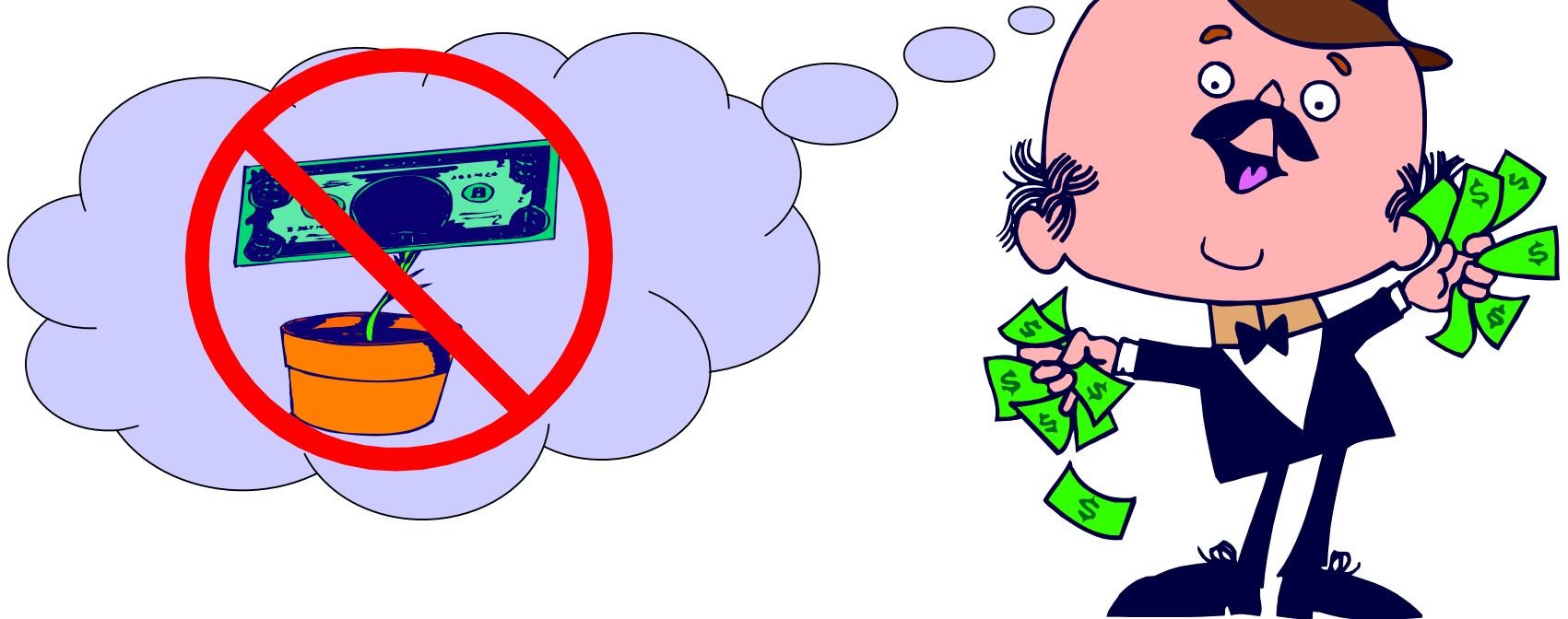




Terminology

Buyer

- A procurement professional regardless of specific job title
- Has fiduciary responsibility
- Acts as an agent for the government





Terminology

Contract

- Verbal or Written Agreement
- Goods and/or Services
- One or more suppliers
- Legally enforceable
 - an offer to buy and acceptance of offer
 - parties capable of entering into contract
 - for a legal purpose
 - supported by consideration





Key Distinctions

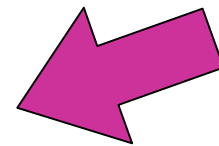
- Source Selection vs. Price Analysis
- Price Analysis vs. Cost Analysis
- Responsibility vs. Responsiveness



Key Distinctions

Source Selection

- How the proposed supplier was selected
 - Competitive or non-competitive
 - Single source
 - Sole Source
 - Responsiveness
 - Responsibility
 - Lowest Evaluated Price
 - Preferences are Source Selection Issues applied AFTER price analysis



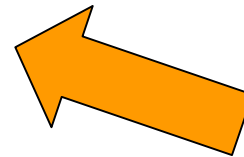
Price Analysis



Key Distinctions

Price Analysis

- Does not include preferences
- Determination of Price as “Fair and Reasonable” (or “Best Obtainable”)
- Evaluation of a supplier’s offered price without evaluating:
 - Separate cost elements
 - Proposed profit



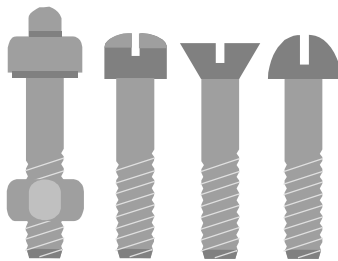
Cost Analysis



Key Distinctions

Cost Analysis

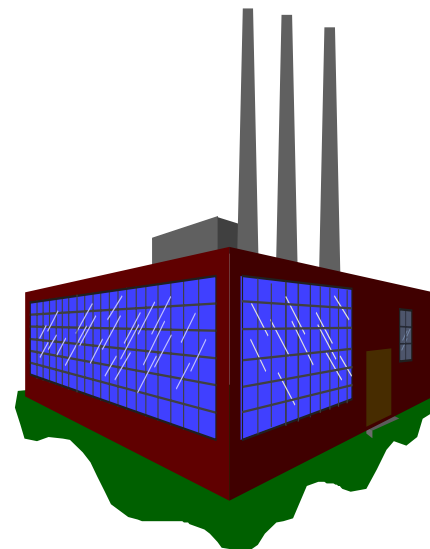
- Price = Cost + Profit
- Cost Analysis includes evaluation of specific, individual cost elements and profit
- Ask for ***SPECIFIC*** needed cost data



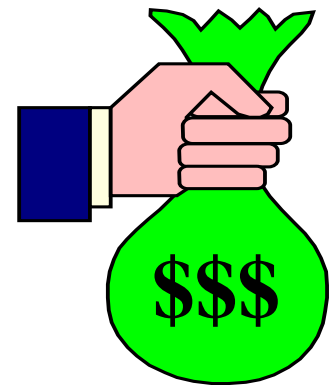
Materials



Labor



Overhead



Profit



Key Distinctions

Responsive to Solicitation

- Conforms
 - To Statement of Work (SOW)
 - To Drawings and/or Specifications
 - Without Material Deviations
- Meets delivery / schedule requirements
- Required documentation provided
- Terms and Conditions accepted without material deviation



Key Distinctions

Responsible Supplier

- 5 Categories per 2 CCR 1890 (d)
- Financial
- Technical
- Facilities
- Experience
- Other



R&R Quiz

- The solicitation required a model 12345 Super Deluxe Thingamajig with spranjous bejemois (or equivalent) Supplier ABC Company quoted their model AJ 153, which did not have the spranjous bejemois.

**Not
Responsible**

Both

**Non
Responsive**



R&R Quiz

- The solicitation required model 78954, Super Widget with super do-hickeys. Supplier RST quoted their model U2, which did not have super do-hickeys. In fact, RST's line of products had never even developed an earlier generation of do-hickeys, the forerunner of the new high-tech super do-hickeys

**Not
Responsible**

Both

**Non
Responsive**



R&R Quiz

- Supplier GHI quoted 5000 cases of frankenberry juice, grade AA and evaluation of the required sample was satisfactory. However, GHI Inc. objected to the buying organization's warranty provision and other significant terms and conditions.

**Not
Responsible**

Both

**Non
Responsive**



R&R Quiz

- One bidder failed to sign the bid as required

**Not
Responsible**

Both

**Non
Responsive**



R&R Quiz

- One of bidders was recently convicted of a violation of the federal Clean Air and Clean Water Acts

**Not
Responsible**

Both

**Non
Responsive**



R&R Quiz

- The bidder submits DVBE paperwork incorrectly

**Not
Responsible**

Both

**Non
Responsive**

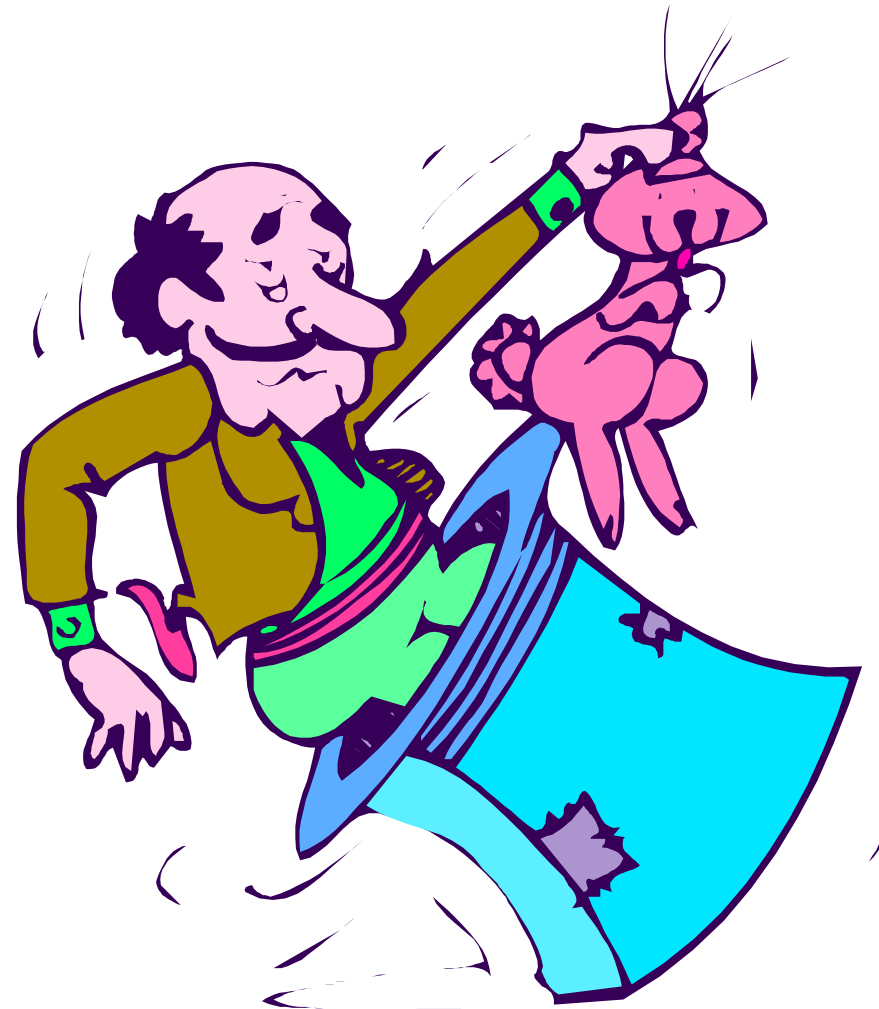


Price Analysis Techniques

- Primary Techniques
- Secondary Techniques

Auxiliary Techniques

**Auxiliary Techniques
can't stand alone!**





3 Primary Techniques

**P
r
i
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a
r
y**

Adequate Price Competition

Catalog or Market Price

Price Set by Law or Regulation



3 Secondary Techniques

Secondary Techniques

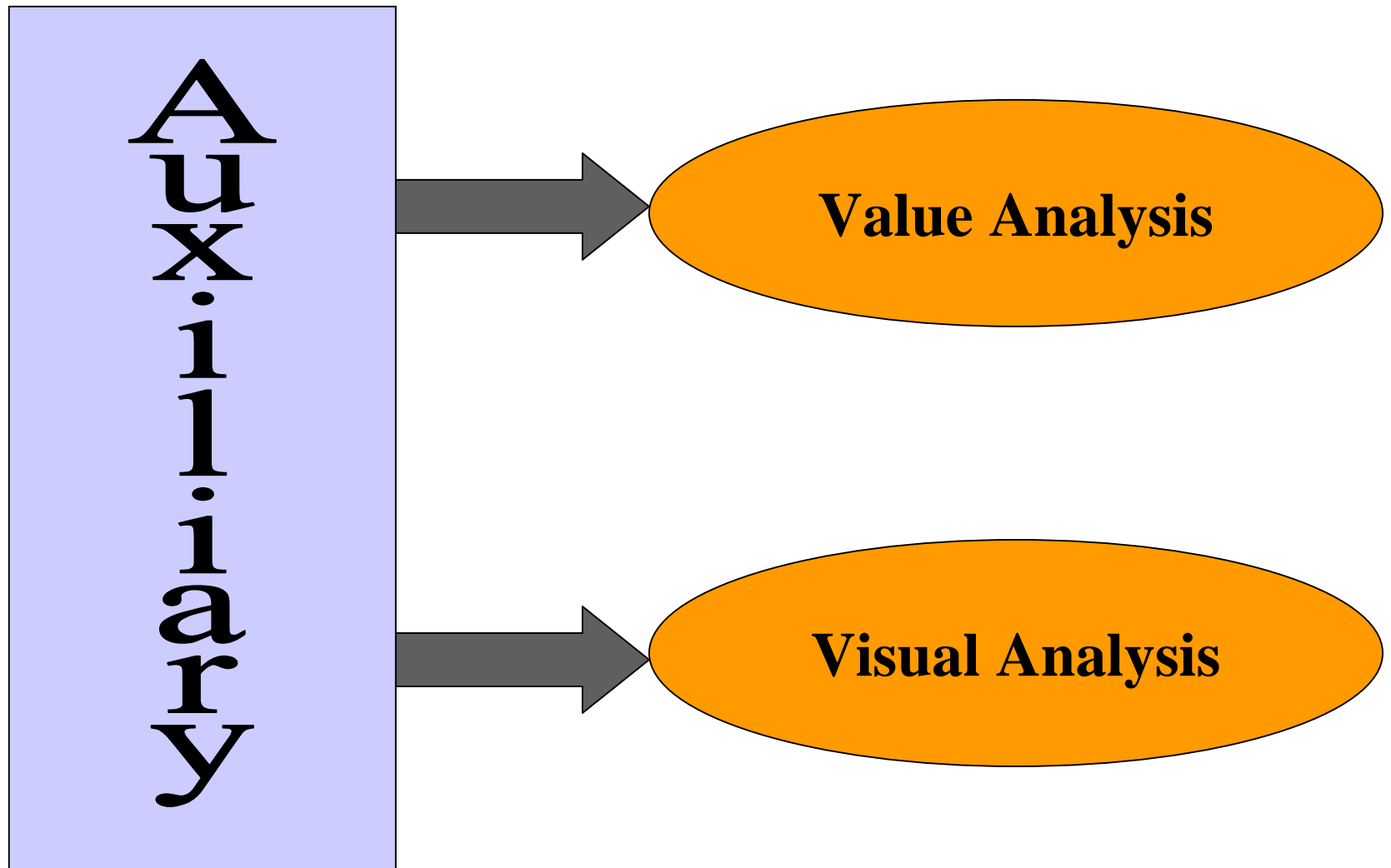
**Historical Price
Same or Similar Item**

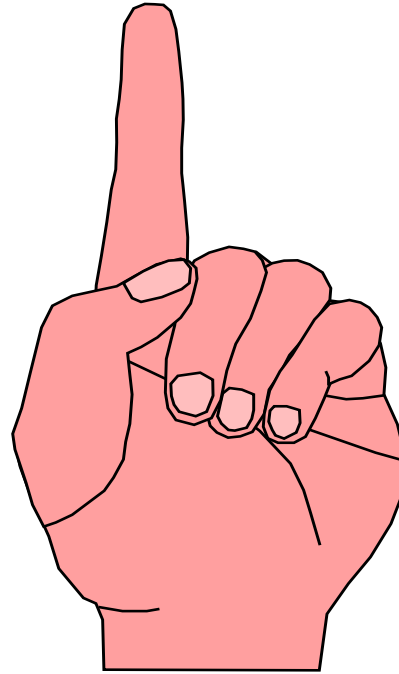
**In House Estimate
Technical Evaluation**

**Cost Estimating Relationship
Parametric Technique**



3 *Auxiliary* Techniques





PRIMARY TECHNIQUE

Adequate Price Competition



Adequate Price Competition

- Two or more bidders
- Independently compete for award
- Responsible
- Responsive
- Award to Lowest Evaluated Price



Adequate Price Competition

- No known, qualified supplier was unreasonably denied an opportunity to compete
- Low bidder not immune from competition
 - Calculation of “Price Variance” PV
 - $PV = (\text{higher bid \$} - \text{low bid \$}) / \text{low bid \$}$
 - e.g., Bidder A bid \$80, Bidder B bids \$100
 - then $(100 - 80) / 80 = 20 / 80 = 25\%$ variance
- Lowest evaluated price objectively reasonable



Adequate Price Competition

Example 1 - Portable Generator

| | Alt. | SPC | EFD | F&Co. | G&S |
|------------------|-----------|----------|-----------|----------|----------|
| Terms | 5% 20 | Net | 5% 20 | 1% 20 | 5% 21 |
| FOB Destination? | Yes | Yes | Yes | Yes | Yes |
| DVBE Compliant? | Yes – GFE | No | Yes – GFE | No | Yes |
| Small Business ? | No | No | Yes | No | Yes |
| T/C Exceptions | None | None | None | None | None |
| Brand Offered | Kohler | Generac | Onan | Magnatek | Onan |
| Total | \$21,310 | \$21,800 | \$22,520 | \$22,910 | \$24,123 |



Price Variance

- Low Bidder is Alturdyne at \$21,310
- Second low **RESPONSIVE** bidder in Elbanna at \$22,520
- Difference is.....
 - \$1,210 (Elbanna's bid minus Alturdyne's bid)
 - $\$22,520 - \$21,310 = \$1,210$
- Price Variance is.....
 - 6% (Difference divided by Alturdyne's bid)
 - $\$1,210 / \$21,310 = 0.06$ or 6%



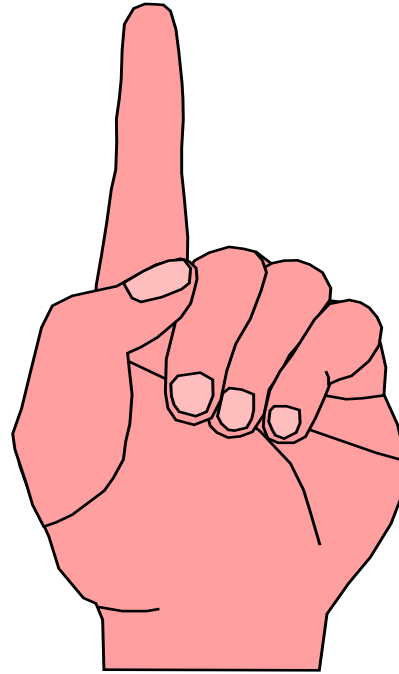
Price Variance

- What is an “acceptable” variance
 - Depends upon good or service
 - Buyers’ knowledge is key
 - If unfamiliar, Rule of Thumb 30%
 - Be careful with “Rule of Thumb”
 - Vehicle buys - variance 1% - 2%
 - 5% would be too high!



Price “Based On” Adequate Price Competition

- No “current” competition
- Use “recent” competition
 - Award made via prior competition determined fair and reasonable
 - Market has not changed substantially
 - Similar quantities



PRIMARY TECHNIQUE

Catalog or Market Price



Catalog or Market Price

- Catalog pricing requires a valid catalog
 - published
 - otherwise available for inspection
- Market pricing requires a valid market
 - price established independent of supplier
 - examples
 - Trade publications
 - Commodities markets



Catalog or Market Price

- 3 Key Characteristics
 - Commercial Item
 - Sold in Substantial Quantities
 - To the General Public
- Tips
 - Beware “special” government catalogs
 - Help suppliers help you with catalog pricing!



Price “Based On” Catalog or Market Price

- Establish prior baseline fair and reasonable
- What is different now?
- What is the value?
 - Use other techniques
 - e.g., buyer expertise, technical evaluation, additional market research
- Based on price analysis, is quoted price fair and reasonable



Price “Based On” Catalog or Market Price

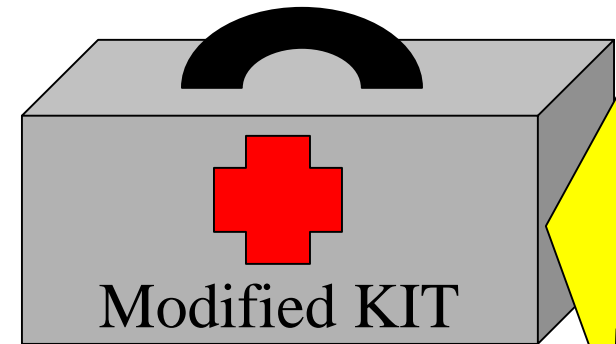
- See example 7
- Sunscreen (required) not included in catalog priced first aid kit
- Catalog Price for first aid kit =\$75
- Quoted kit price including sunscreen = \$115
- How to Price the \$40 difference ???



Pricing Modified First Aid Kit Including Sunscreen



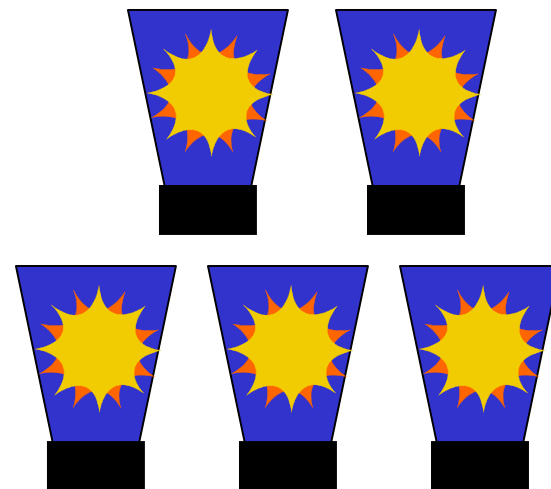
Catalog Priced @ \$75



Quoted @ \$115




How to price \$40 difference???





Pricing the Modified Kit



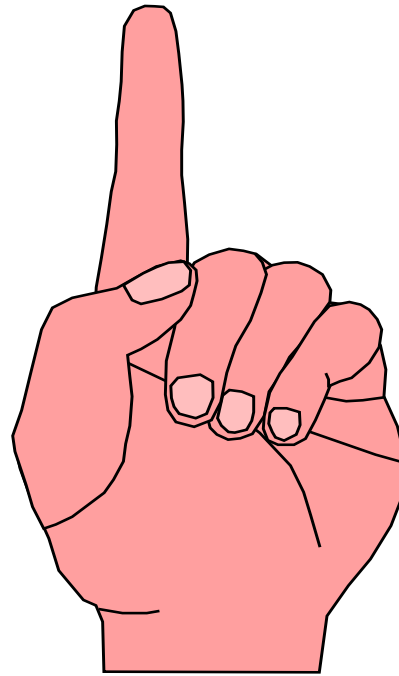
**I'm working on
a price analysis
on the first aid
kit you quoted.
How did you
price the
sunscreen ?**

**\$6 per bottle for
the sunscreen plus
a \$10
administrative
cost per kit**



Pricing the Modified Kit

- \$6.00 per bottle for sunscreen
 - informal survey of local stores
 - charges range from \$4.95 to \$18.00 per bottle
- \$10.00 administrative charge
 - buyer considers nominal charge compared with common shipping / handling charges
- Document the file!



PRIMARY TECHNIQUE

Price Set by Law or Regulation



Price Set by Law or Regulation

- Identify Law or Regulation that sets price
- Application
 - Is supplier regulated by law / regulation ?
 - Is the Government exempt from law /regulation ?
- Presumption that price is fair and reasonable



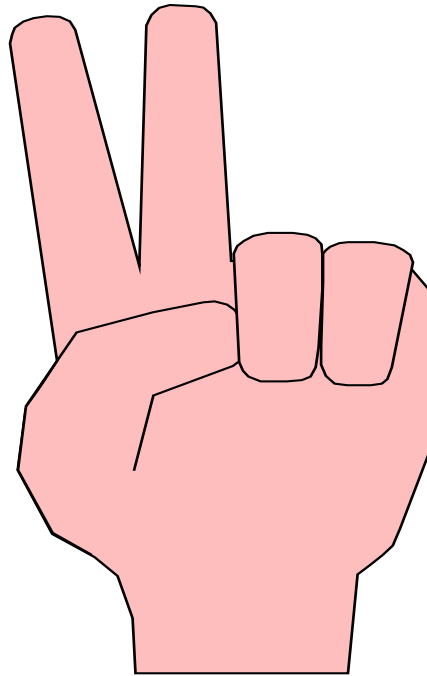
3 Secondary Techniques

Secondary Techniques

**Historical Price
Same or Similar Item**

**In House Estimate
Technical Evaluation**

**Cost Estimating Relationship
Parametric Technique**



SECONDARY TECHNIQUE

Historical Price Comparison

Same Item



Historical Price Comparison

Same Item

- “VERY recent” historical price comparison
 - Competition was attempted
 - Adequate Price Competition NOT achieved
 - Other bidder(s) were technically compliant but non-responsive in their bid
 - Must be technically compliant
 - Non-compliance cannot have cost impact
 - May use price(s) from those bid(s) received in the *current* competition for price analysis



Assume EFD and G&S are **not** DVBE compliant

| | Alt. | Adequate Price Competition NOT achieved | | | |
|------------------|-----------|---|----------|----------|----------|
| Terms | 5% 20 | Net | 5% 20 | 1% 20 | 5% 21 |
| FOB Destination? | Yes | Yes | Yes | Yes | Yes |
| DVBE Compliant? | Yes – GFE | No | No | No | No |
| Small Business ? | No | No | Yes | No | Yes |
| T/C Exceptions | None | None | None | None | None |
| Brand Offered | Kohler | Generac | Onan | Magnatek | Onan |
| Total | \$21,310 | \$21,800 | \$22,520 | \$22,910 | \$24,123 |



Historical Price Comparison

Same Item

- Find “Baseline”
 - Historical price from past buy
 - Baseline must be fair and reasonable
- Escalate using indices
 - Bureau of Labor Statistics
 - “www.stats.bls.gov/blshome.html”
 - both labor and material escalation indices
 - accounts for inflation
 - also may “de-escalate” (e.g. - computers)
 - Be consistent in “from” and “to” dates



Escalation: Consistency in Selection of Dates

OLD ORDER



NEW ORDER





Historical Price Comparison

Same Item

- Adjust for quantity differences
 - Learning curves
 - Price / Quantity curves
- Calculate “Should Cost” price
 - compare to quoted price
 - Is quote fair and reasonable?
- Document your analysis
 - tip: use attachments!



Historical Price Comparison

Same Item

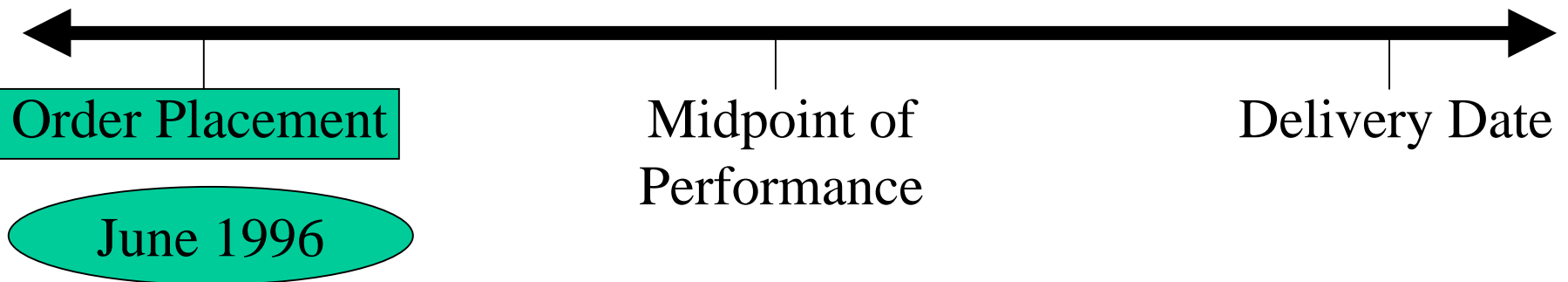
Exercise 12

Highway Signs

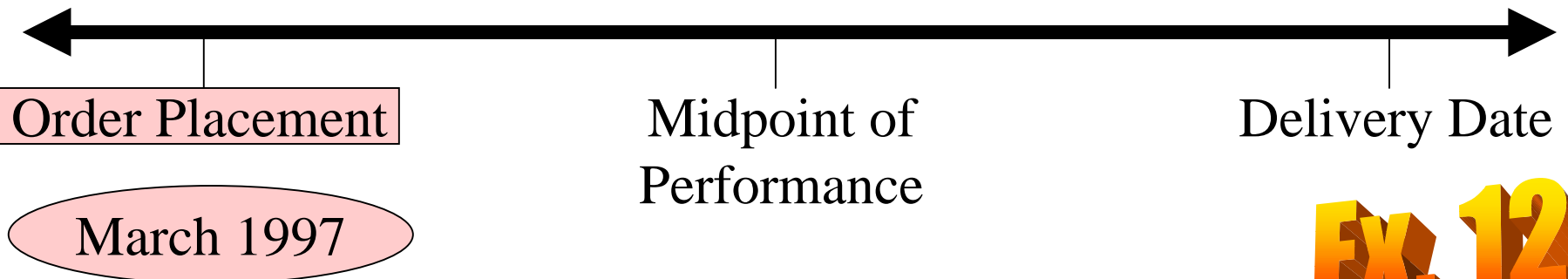


Escalation: Consistency in Selection of Dates

OLD ORDER



NEW ORDER



EX. 12



“Givens”

- Information from file
 - Award Date June 1996
 - Ordered 300 @ \$1,282.66 each
 - Price was documented “fair and reasonable”
- Solicitation / Quote
 - Projected award date of March 1997
 - Requirement for 300
 - Price quoted is \$1,337.93 each
 - Effort in making signs = 15% labor & 85% material



Visit BLS website *www.stats.bls.gov*

- Labor Indices (Average Hourly Earning)
- Select “Fabricated Metal Products” index
 - Old Order
 - July 1996 (*order was June 1996*)
 - Index = \$12.51
 - New Order
 - May 1997 (*projected order date is March 1997*)
 - Index = \$12.78
 - Calculate Labor Escalation Factor
 - New Index / Old Index
 - $12.78 / 12.51 = 1.022$



Visit BLS website
www.stats.bls.gov

- Material Indices
- Select “Aluminum Mill Shapes” index
 - Old Order
 - June 1996 (*material indices listed monthly*)
 - Index = 147.1
 - New Order
 - March 1997
 - Index = 147.6
 - Calculate Material Escalation Factor
 - New Index / Old Index
 - $147.6 / 147.1 = 1.003$

EX. 12



Calculate Composite Escalation Factor

- Labor escalation factor is 1.022
 - What % of the effort / price is labor?
 - 15%
 - escalation factor X labor% = $1.022 \times 0.15 = .1533$
- Material escalation factor is 1.003
 - What % of the effort / price is material
 - 85%
 - escalation factor X mat'l% = $1.003 \times 0.85 = .8526$
- Composite factor = $.1533 + .8526 = 1.0059$

EX. 12



Complete and Compare

- Complete “Should Cost”
 - Old Unit Price X Composite Escalation Factor = “Should Cost”
 - \$1,282.66 X 1.0059 = \$1,290.23
- Compare “Should Cost” to Quote
 - \$1,290.23 - \$1,337.93 = \$47.70 difference
 - Calculate Variance
 - Difference / “Should Cost” = Variance
 - \$47.70 / \$1,290.23 = .03697 = 3.7%
 - Determine the quote is fair and reasonable

EX. 12



Remember.....

communicate

Your

Analysis!

document

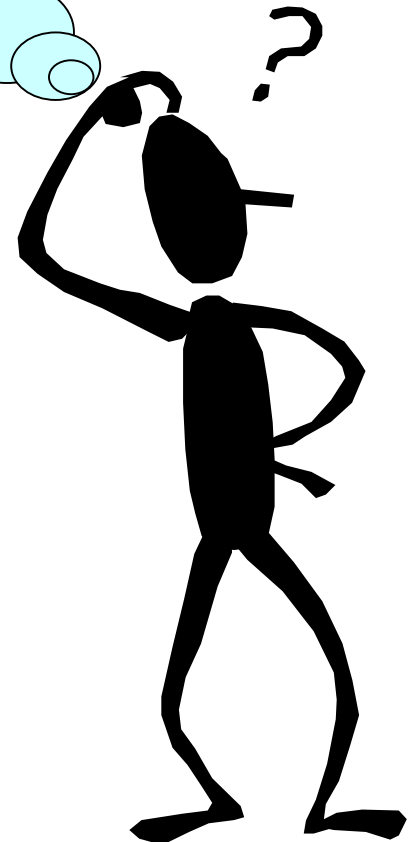
document

document



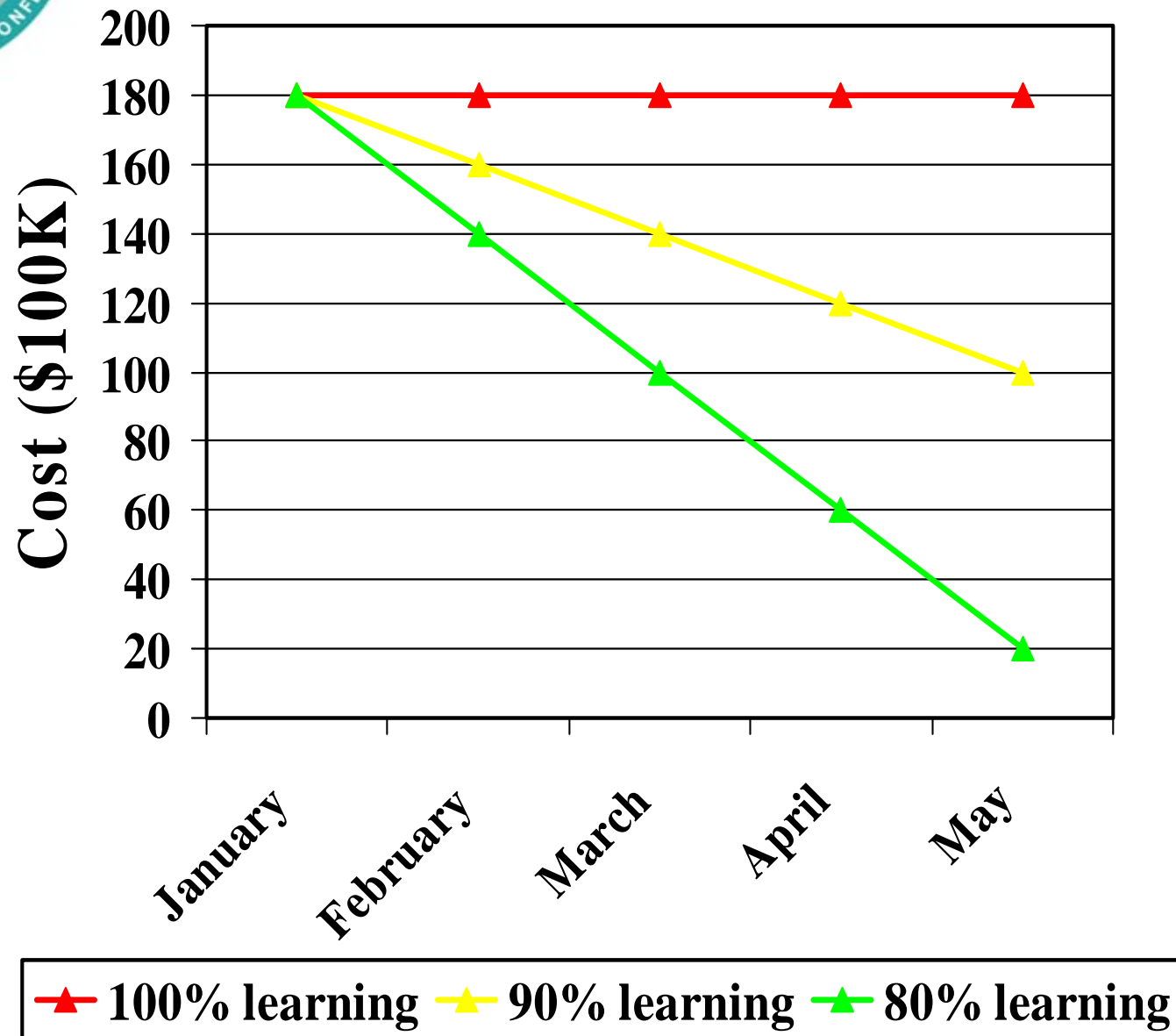
**How do I deal
with difference in
quantity from my
“old order” to my
“new order”**

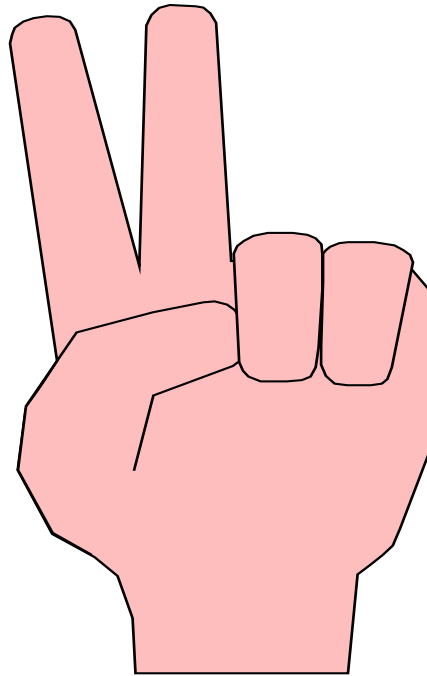
- **Learning Curves**
 - Large, complex procurements
 - Unique items
- **Price / Quantity Curves**
 - Depends on quantity in current lot
 - “Cheaper by the Dozen”





Learning Curve





SECONDARY TECHNIQUE

Historical Price Comparison

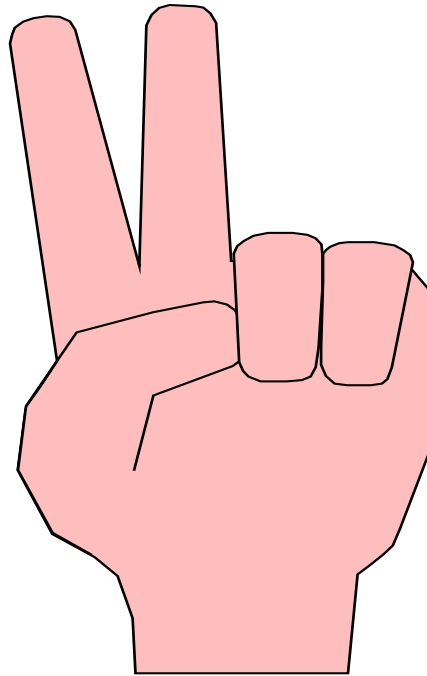
Similar Item



Historical Price Comparison

Similar Item

- Use same escalation techniques
- Price that which is different
- Similar to “First Aid Kit / Sunscreen” example
- Pricing Class example - Exercise 14
 - CA Conservation Corps crew vehicle truck with new “special” compartment
 - Use escalation techniques with “old order” of crew vehicle truck as baseline
 - Price adding new “special” compartment - How?
 - Buyer modify “should cost” for 5% extra labor cost
 - Technical Evaluation for material cost



SECONDARY TECHNIQUE

Technical Evaluation /

In-House Estimate



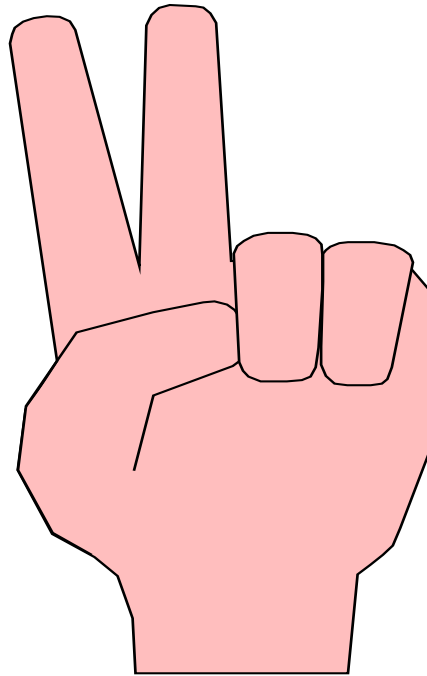
Technical Evaluation / In-House Estimate

- Seek technical input as required
- Prepare written estimate
 - Independent estimate without respect to quote
 - may have been developed during budgeting process
 - Estimate that directly evaluates quote
- Determine estimated “should cost”
- Compare to quote
- Is quote “fair and reasonable”
- *Tips: Document expertise of estimator and have estimator be specific in exceptions to bid*



Technical Evaluation / In-House Estimate

Example 15 "Bear Proof" Trash Cans



SECONDARY TECHNIQUE

*Cost Estimating Relationships /
Parametrics*



Cost Estimating Relationships / Parametrics

- Find item for comparison
 - Similar item
 - Industry standard
- Get technical input
 - document technical expertise
 - determine key characteristics / cost drivers
- Determine CER and calculate “should cost”
- Compare to quote
- Is quote “fair and reasonable” ?



CER Example



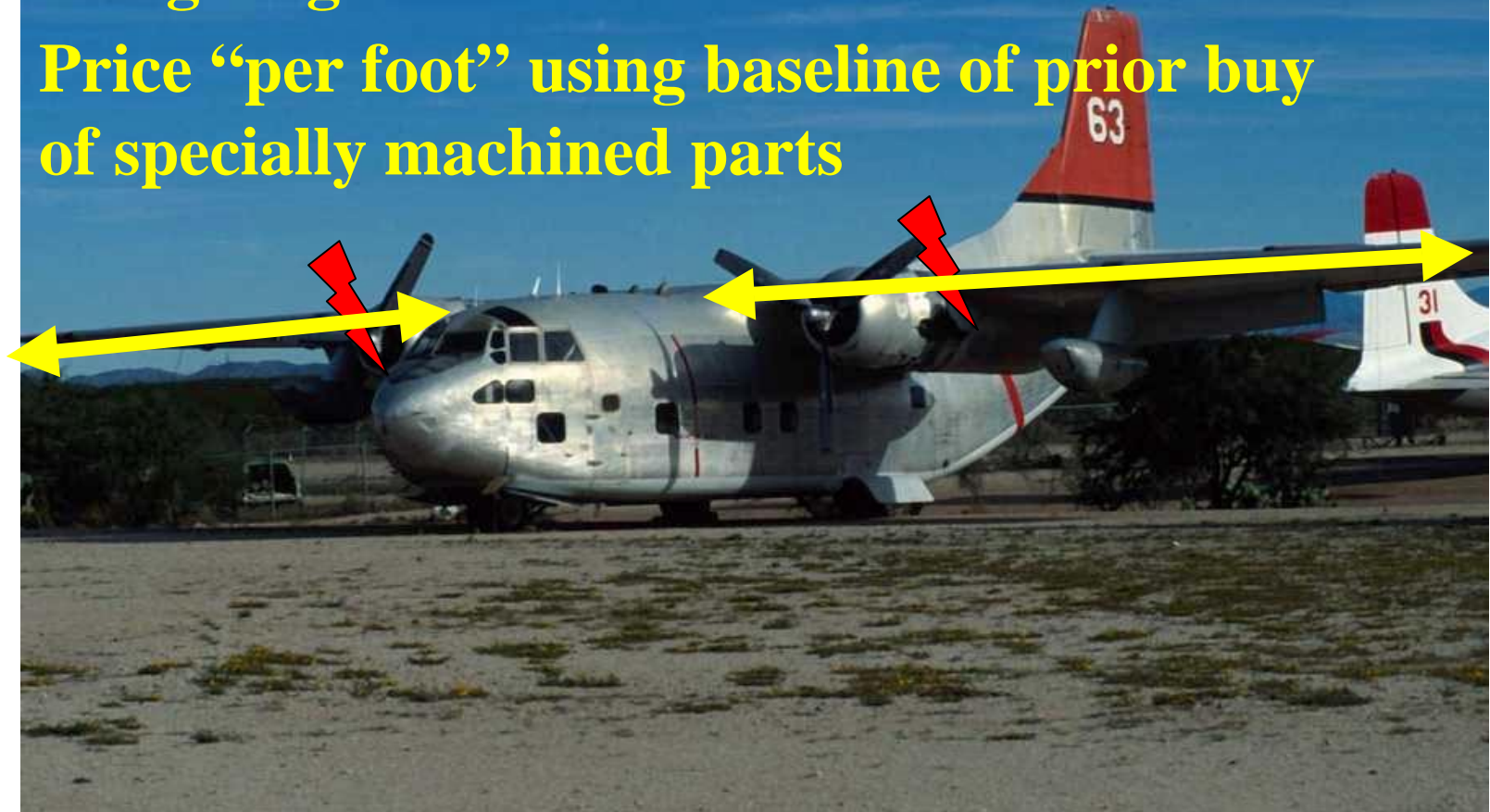


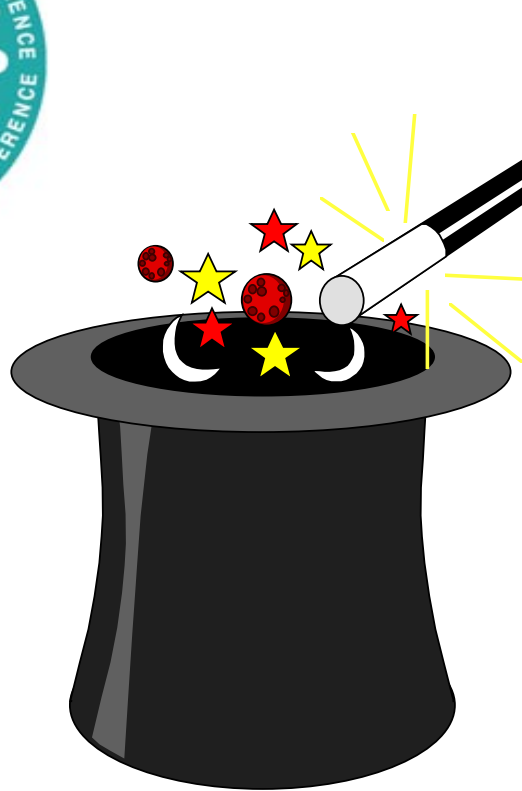
CER Example

Need to reinforce wings

**Measure length of stiffeners, machined
along length**

**Price “per foot” using baseline of prior buy
of specially machined parts**





AUXILIARY TECHNIQUES

Value Analysis & Visual Analysis



Value & Visual Analysis

- Value Analysis
 - Establish Value to Gov't or end user
 - If item not procured, value of impact is ???
 - Potential Savings /Cost Avoidance
- Visual Analysis
 - Visual Observation
 - “Bigger than a breadbox” & made of metal
- Cannot stand alone, supplement other techniques



Matrix and Hierarchy

- Please see your packet
 - Tools Application Matrix
 - Hierarchies
 - Top Level
 - Detailed Checklist





Hierarchy Review

Primary Techniques

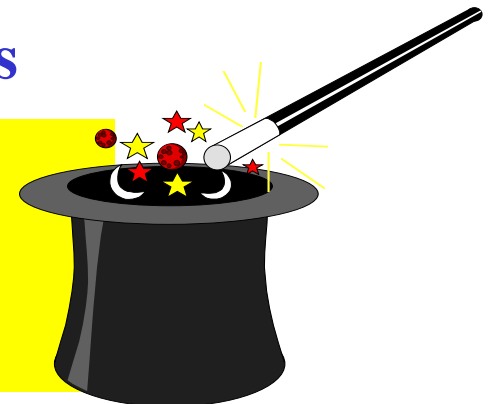
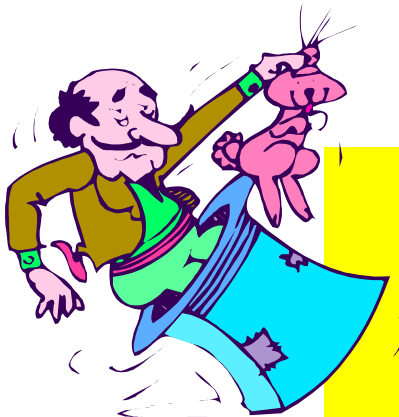
- Adequate Price Competition
- Catalog or Market Price
- Price Set by Law or Regulation

Secondary Techniques

- Historical Price / Same or Similar Item
- Technical Evaluation / In House Estimate
- Cost Estimating Relationships (CERs) / Parametrics

Auxiliary Techniques

- Value Analysis
- Visual Analysis





Useful Websites

- Department of General Services / Procurement Division (DGS / PD)
 - <http://www.dgs.ca.gov/pd>
- National Contract Management Association (NCMA) home page
 - <http://www.ncmahq.org/>
- NCMA Gold Rush Chapter home page
 - <http://www.jps.net/mastella/index1.htm>
- Defense Acquisition Deskbook
 - <http://www.deskbook.osd.mil/>



Congratulations

We hope you learned some new price analysis "tricks"!



Enjoy the rest of CalPro!